

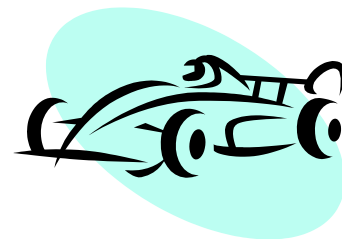
**TAG: Learning Set 1 Intro &
1.1 Understand the Challenge**

Name _____
Hour _____ Date _____

The Coaster-Car Challenge: Design and Build a Coaster Car That Goes Straight and Far

Read p. 13.

What is a coaster car?



1.1 Understand the Challenge

Read the first paragraph on p. 14.

What is the purpose of the chassis? (pronounced: chassee)

Identify Criteria and Constraints

Read the paragraph on the bottom of p. 14 (and look back at p. 15 if you need to).

Identify the criteria and constraints for your coaster car in the chart:

Criteria	Constraints

Build Your Coaster Car

Read p. 15 and the top of p. 16.

Sketch your coaster car and label the following parts: axels, wheels, bearings. After you sketch and label it, build your car.

Mess About With Your Coaster Car

Read p. 16 and mess about with your coaster car. Fill out the “Messing About Observations: Coaster Car” pages.

Coaster-Car Motion

Read the box on the top of p. 17. Write one or two sentences summing up your observations from the “Messing About” activity using all of the following words: *motion*, *speed*, *propulsion force*, and *gravity*. Be sure you underline the terms.



Communicate

Share Your Coaster Car's Performance. Record your notes on other groups' presentations below:

Group	Notes
1	
2	
3	
4	
5	
6	
7	



Reflect

Answer the following questions with your group:

1. How does the performance of your coaster car compare to the performance of other cars? Be specific about the criteria you used for your comparisons.
2. What about a coaster's motion do you think you can measure to allow you to compare the motion of one coaster car to another?
3. What needs to be improved about your car's performance?
4. What do you need to learn more about to improve your car's performance?

Update the Project Board

With your class, update the first two columns of your Project Board.